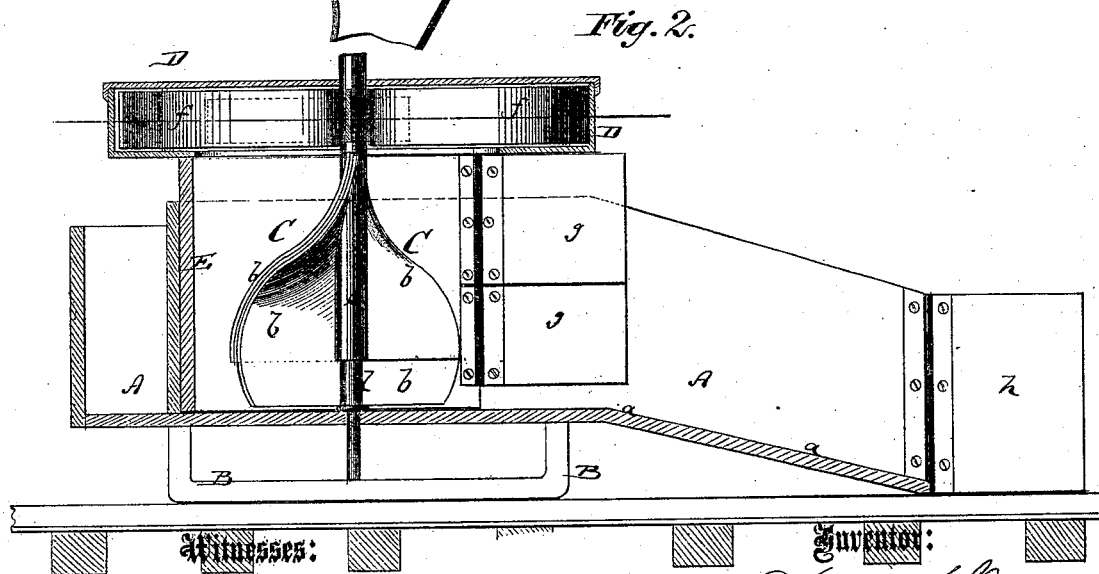
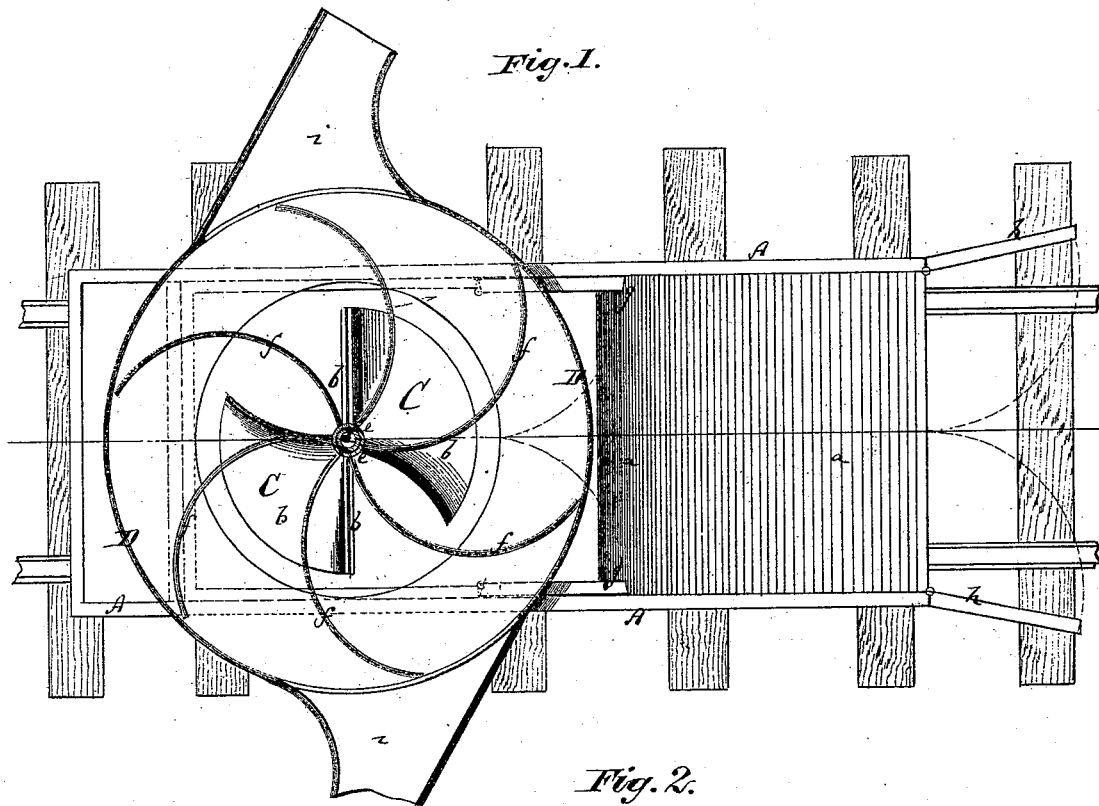


R. C. HARRIS.

Snow Plow.

No. 107,485.

Patented Sept. 20, 1870.



Witnesses:

Custave Dietrich  
G. S. Habee

Inventor:

R. C. Harris  
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# United States Patent Office.

ROBERT CARR HARRIS, OF MAPLE GREEN, NEW BRUNSWICK.

Letters Patent No. 107,485, dated September 20, 1870.

## IMPROVEMENT IN SNOW-PLOWS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, ROBERT CARR HARRIS, of Maple Green, in the county of Restigouche and Province of New Brunswick, have invented a new and improved Snow-Plow; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

Figure 1 represents a horizontal section of my improved snow-plow.

Figure 2 is a longitudinal vertical section of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new snow-plow, which is to be secured in front of a locomotive or railroad-train, for the purpose of cleaning the track of the snow.

The invention consists in the general new arrangement of an elevating scoop, screw, and discharge-wheel or "fling," all combined to elevate and scatter the snow, and also in making the said screw vertically extensible or contractible, for the purpose of adjusting the apparatus to snows of varying depth.

A in the drawing represents the frame or case of my improved snow-plow. It rests on runners B or wheels, as may be desired, and is either secured to a locomotive or other propelling apparatus, or is provided with its own propelling mechanism.

The front part of the case A contains an inclined platform, *a*, lowest at the front end, and serving as a scoop for taking up and gradually elevating the snow.

In the rear part of the case A is set up a vertical screw, C, which has broad blades, *b*, on a slender stem, *d*, and which, as it is being revolved, serves to elevate the snow that is brought to it on the scoop.

The screw C consists of two parts, the upper part being mounted upon a slotted tubular axle, *e*, which is fitted around the stem *d*.

The axle *e* carries wings or blades *b*, that rest against and form extensions of the blades on the stem.

The screw can, by this arrangement, be lengthened or shortened at will, so as to elevate the snow to a greater or lesser height.

The screw C conveys the snow into a cylindrical vessel, D, which is arranged above said screw, as shown, being traversed by the upper part of the tube *e*.

Within the cylinder D are mounted, upon the tube *e*, arms *f f*, which throw the snow, that has been elevated by the screw C, out through openings in the sides of the cylinder.

The screw C is surrounded by a box, E, which has two or more tiers of gates, *g g*, that can be opened or closed at will, to let more or less snow to the screw.

This box is suspended from the cylinder D, and, therefore, vertically adjustable with the tube *e*.

The front of the case A is also provided with gates *h*, which can be opened to form flaring sides, for taking the snow from a greater or lesser width.

The machinery for adjusting the length of the screw C, and the consequent height of the cylinder D and arms *f f*, can be of suitable construction, as well as that for rotating the screw and arms.

The openings in the side of the cylinder lead into discharge-channels *i*, of suitable shape and length.

These channels may be pivoted or attached so as to be adjustable to project in any direction for discharging the snow, where desired.

The apparatus, and every part of it, can be made of suitable material.

The vertical extension of the screw is to be aided by four vertical hollow screws and screw-cores, (like jack-screws,) actuated simultaneously by gearing from the engine, these jack-screws, when screwed up or screwed down, serving to maintain the fling up or down. They may rest on the floor of the car and act against the under side of the fling.

These, being of ordinary construction, are not claimed in this specification nor shown in the drawing.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. The vertically-extensible screw C, applied to a snow-plow, for elevating the snow as set forth.

2. The rotary arms *f*, applied to a snow-plow, in combination with the screw C, substantially as herein shown and described.

3. A snow-plow, composed of the scoop *a*, screw C, cylinder D, rotary arms *f*, and box E, all arranged to operate substantially as herein shown and described.

ROBERT CARR HARRIS.

Witnesses:

J. C. BARBINE,  
C. H. MORSE.